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JONES DAY 222 EAST 41ST ST NEW YORK, NY 10017			EXAMINER GILLESPIE, BENJAMIN	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/540,154

Applicant(s)

CARTER ET AL.

Examiner

BENJAMIN J. GILLESPIE

Art Unit

1796

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 7, 9-26 and 29-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 9-26 and 29-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The current action contains new grounds of rejections that have been necessitated by applicants' amendment filed 9/9/2009. The previously entered claims (3/9/2009) were never considered with the requirement of an NCO:OH ratio between 2:1 and 16:1. Thus, it is proper to make the current action FINAL.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(b), 102(e), and 103(a) that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Anticipation Rejection I

3. **Claims 1, 2, 31** are rejected under 35 U.S.C. 102(c) as being anticipated by Westfechtel et al (U.S. Patent 6,610,811).
4. **Regarding claim 1:** Westfechtel et al teach adhesives comprising A) polyol and B) isocyanate-terminated prepolymer. This prepolymer is the reaction product of (i) polyisocyanate and (ii) hydroxyl-functional polyester based on diol and dimer fatty acid, wherein (i) and (ii) are present in an NCO:OH ratio of at least 2:1 (Col 2 lines 13-21; col 4 lines 51-57; and col 6 lines 3-5). It is noted that the reaction of A) and B) fails to satisfy the claimed NCO:OH ratio, however, the reaction between (i) and (ii) satisfies the claimed "reaction product" of claim 1. Moreover, claim 1 does not exclude additional components that would correspond to component A) of Westfechtel et al.
5. **Regarding claim 2:** Although not explicitly disclosed by Westfechtel et al, the relied upon polyisocyanate would exhibit the claimed viscosity at 25°C since the polyisocyanate of example 1 are referred to as "liquid polyisocyanate" at "room temperature".
6. **Regarding claim 31:** Column 4 lines 55-57 teach that the polyester polyol may be produced by reacting diol with dimer fatty acid "or" trimer fatty acid, i.e. the fatty acid may be 100% dimer.

Anticipation/Obviousness Rejection I

7. **Claims 10, 14-19, 24-26, and 29** are rejected under 35 U.S.C. 102(c) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Westfechtel et al ('811).
8. **Regarding claims 10, 14-19:** As previously discussed in paragraph 4 of the instant rejection, Westfechtel et al teach adhesive comprising isocyanate-terminated prepolymer,

however, there is no mention of glass transition temperatures or mechanical properties.

Nevertheless, the relied upon composition would inherently exhibit the same properties since it is based on identical reactants present in overlapping amounts.

9. Furthermore, when applicant claims a composition in terms of a function, property or characteristic and the composition of the prior art is the same as that of the claim but the function is not explicitly disclosed by the reference, the examiner may make a rejection under both 35 U.S.C. 102 and 103, expressed as a 102/103 rejection. In re Best, 562 F.2d 1252, 1255 n.4, 195 USPQ 430, 433 n.4 (CCPA1977).

10. The PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his [or her] claimed product. Whether the rejection is based on inherency' under 35 U.S.C. 102, on prima facie obviousness' under 35 U.S.C. 103, jointly or alternatively, the burden of proof is the same. The burden of proof is similar to that required with respect to product-by-process claims. In re Fitzgerald, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980) (quoting In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977)).

11. **Regarding claims 24, 26, and 29:** Although Westfechtel et al fail to teach the viscosity of the prepolymers listed on column 4 lines 51-57, similar to the discussion set forth in paragraphs 8-10, said prepolymer would inherently exhibit the same viscosity as claimed since it is based on an identical composition.

12. **Regarding claim 25:** The prepolymer may further comprise unreacted polyisocyanate (Col 5 lines 9-10).

Obviousness Rejection I

13. **Claims 3, 7, 9, 11-12, 20, 23, 30, 32-34** are rejected under 35 U.S.C. 103(a) as being unpatentable over Westfechtel et al ('811)
14. **Regarding claim 3:** As discussed in paragraph 4 of the instant rejection, Westfechtel et al teach an adhesive comprising an A) hydroxyl-functional polyester based on fatty acid, and B) isocyanate-terminated prepolymer (Abstract). Component B) is the product of polyisocyanate and hydroxyl-functional polyester that also contains units based on fatty acid. Although the reactants comprising A) are disclosed, there is no mention as to what specific reactants are useful in the production of the hydroxyl-functional polyester for component B).
15. Nevertheless, one of ordinary skill would have arrived at the limitations of claim 3 since Westfechtel et al teach, for component A), what reactants are suitable for the production of hydroxyl-functional polyester based on fatty acids, and one of ordinary skill would be motivated to use the same reactants in the production of B) since it would yield a homogenous final product. With this understanding, the hydroxyl-polyester of A) is produced using dimers of C18 compounds (Col 2 lines 27-30).
16. **Regarding claims 7, 33, and 34:** With the rationale set forth in paragraph 15 of the instant rejection, Westfechtel et al render obvious using diol such as ethylene glycol and/or propylene glycol (Col 3 lines 10-14).
17. **Regarding claim 9:** With the rationale set forth in paragraph 15 of the instant rejection, Westfechtel et al teach the polyester in A) has a hydroxyl number from 100 to 175 – which equates to a molecular weight of about 600 to 1,000. Therefore, it would have been obvious to use polyester diol having a hydroxyl number between 100 and 175 in B) since it is the suitable value for dimer diol and the dimer diol is disclosed as being interchangeable with the polyester.

18. **Regarding claim 11:** With the rationale set forth in paragraph 15, Westfechtel et al suggest polyester having molecular weights as low as 600, and since the prepolymer is formed at a NCO:OH ratio as high as 6:1, one would reasonably expect the reaction system to produce 'perfect prepolymers' i.e. a single hydroxyl-terminated polyester capped with two diisocyanate molecules - such as diphenylmethane diisocyanate (MDI). This would result in a perfect prepolymer having a molecular weight of 1,100:

$$(1 \text{ mole}) 600 \text{ MW polyester} + (2 \text{ mole}) 250 \text{ MW MDI} = 600 + 500 = 1,100.$$

19. **Regarding claim 12:** The prepolymer has an isocyanate content of 16.8 wt% (Col 6 lines 22).

20. **Regarding claim 20:** Although Westfechtel et al fail to explicitly teach the adhesive coating on a substrate, it would have been obvious to apply the adhesive to a substrate since this step is required when bonding various materials.

21. **Regarding claim 23:** Example 1 – prepolymer B contains 0 wt% dimer fatty acid - which satisfies the limitation "not more than 40% by weight" i.e. 0-40 wt%.

22. **Regarding claim 30:** Example 1 – prepolymer B contains 0 wt% dimer fatty acid – which satisfies the limitation "not more than 40% by weight" i.e. 0-40 wt%.

23. **Regarding claim 32:** With the rationale set forth in paragraph 15, the polyol of A) comprises low molecular weight diol is present relative to the carboxylic acid groups in an OH:COOH ratio ranging from 1.8:1 to 2:1 (Col 3 lines 16-22). Thus it would be obvious to use the same OH:COOH ratio in the polyol of B).

Anticipation Rejection II

24. **Claims 1, 3, 4, 7, 20, 33, and 34** are rejected under 35 U.S.C. 102(e) as being anticipated by Tetsuo et al (JP 2003-013032).
25. **Regarding claim 1:** Tetsuo et al also teach moisture curable adhesives comprising polyurethane that is the reaction product of (i) polyisocyanate and (ii) hydroxyl-functional polyester, wherein said polyester is based on dimer and trimer of fatty acid (Abstract, paragraph 11). It is preferred that the dimer is present by at least 70 wt% and the trimer present by at most 20 wt% since these amounts prevent unwanted gelling (Paragraph 12). The amount of (i) and (ii) corresponds to an NCO:OH ratio as high as 3:1 (Paragraph 5).
26. **Regarding claim 3:** The dimer is based on C18 fatty acids (Paragraph 12)
27. **Regarding claim 4:** Aforementioned, the trimer is present by as much as 20 wt%.
28. **Regarding claims 7, 33, and 34:** The diol is based on ethylene or propylene glycol (Paragraph 16).
29. **Regarding claim 20:** The adhesive is applied to various substrates (Paragraph 44).

Anticipation/Obviousness Rejection II

30. **Claims 10, 14-19, 24, 26, 29, and 31** are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over by Tetsuo et al (JP 2003-013032).
31. **Regarding claims 10, 14-19, 24, 26, and 29:** As previously discussed in paragraph 25 of the instant rejection, Tetsuo et al teach adhesive comprise isocyanate-terminated prepolymer based on the reaction product of polyisocyanate and dimer diol and/or dimer fatty acid, however, patentees fail to teach glass transition temperatures or mechanical properties. Nevertheless, the

relied upon composition would inherently exhibit the same properties since it is based on identical reactants present in overlapping amounts.

32. Furthermore, when applicant claims a composition in terms of a function, property or characteristic and the composition of the prior art is the same as that of the claim but the function is not explicitly disclosed by the reference, the examiner may make a rejection under both 35 U.S.C. 102 and 103, expressed as a 102/103 rejection. In re Best, 562 F.2d 1252, 1255 n.4, 195 USPQ 430, 433 n.4 (CCPA1977).

33. The PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his [or her] claimed product. Whether the rejection is based on inherency' under 35 U.S.C. 102, on prima facie obviousness' under 35 U.S.C. 103, jointly or alternatively, the burden of proof is the same. The burden of proof is similar to that required with respect to product-by-process claims. In re Fitzgerald, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980) (quoting In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977)).

34. **Regarding claim 31:** Tetsuo et al teach the dimer fatty acid is preferably used by *at least* 70 wt%, i.e. 70-100 wt%.

Obviousness Rejection II

35. **Claims 1-4, 7, 9-20, 23-26, and 29-34** are rejected under 35 U.S.C. 103(a) as being unpatentable over Westfechtel et al ('811) in view of Tetsuo et al (JP 2003-013032).

36. **Regarding claims 1 and 4:** As discussed in paragraphs 5, 14, and 15, Westfechtel et al teach B) isocyanate-terminated prepolymer that is the reaction product (i) polyisocyanate and (ii)

hydroxyl-functional polyester, wherein (ii) is based on dimer and trimers of fatty acid, however, Westfechtel et al fail to teach the full claimed range of dimer/trimer.

37. As previously discussed in paragraph 25, Tetsuo et al also teach moisture curable adhesives comprising polyurethane that is the reaction product of polyisocyanate and hydroxyl-functional polyester, wherein said polyester is based on dimer and trimer of fatty acid (Abstract, paragraph 11). It is preferred that the dimer is present by at least 70 wt% and the trimer present by at most 20 wt% since these amounts prevent unwanted gelling (Paragraph 12). Therefore, it would have been obvious to arrive at the claimed dimer/trimer ranges because they yield polyester having a viscosity desirable for liquid, moisture curable polyurethane adhesive.

38. **Regarding claim 2:** While Westfechtel et al teach the polyisocyanate is “liquid polyisocyanate” there is no discussion of the specific range in claim 2. Nevertheless, in view of Tetsuo et al, it would have been obvious to arrive at said range because Tetsuo et al teach that the adhesive may also comprise a solvent depending how it is applied to a substrate (Paragraph 27). Therefore, it would have been obvious to arrive at the claimed polyisocyanate viscosity since it is controlled by the amount of said solvent is added and applicants’ currently claimed adhesive does not preclude the presence of solvent.

39. **Regarding claim 3:** See paragraphs 14 and 15 of the instant rejection, herein incorporated by reference.

40. **Regarding claims 7, 33, and 34:** See paragraph 16 of the instant rejection, herein incorporated by reference.

41. **Regarding claims 9 and 11:** See paragraphs 17 and 18 of the instant rejection, herein incorporated by reference.

42. **Regarding claim 12:** The prepolymer has an NCO content of 16.8 wt% (Col 6 lines 22).
43. **Regarding claims 13, 23, and 30:** Prepolymer B, Example 1 of Westfechtel et al has 33 wt% of diol and 67 wt% of polyisocyanate. Therefore in view of Tetsuo et al, which teach that the diol is a polyester having 70 wt% of dimer fatty acid, the resulting prepolymer would have 23 wt% of dimer fatty acid:

$$(.7)*(33) = .2324 = 23.24\%$$

44. **Regarding claim 20:** As discussed in paragraph 48, it would be obvious to apply the adhesive of Westfechtel et al to a substrate.
45. **Regarding claims 10, 14-19, 24, 26, and 29:** Although not explicitly disclosed in the prior art, one of ordinary skill would reasonably expect the adhesive rendered obvious by Westfechtel et al in view of Tetsuo et al to exhibit the claimed glass transition temperatures, mechanical properties, and viscosities since said adhesive is based on identical reactants that are present in overlapping amounts.
46. **Regarding claim 25:** See paragraph 12 of the instant rejection, herein incorporated by reference.
47. **Regarding claim 31:** Column 3 lines 27-31 of Westfechtel et al states that the polyester polyol may be produced by reacting diol with dimer fatty acid “**and/or**” trimer fatty acid, i.e. the fatty acid may consist of 100% dimer fatty acid – which the secondary teachings of Tetsuo et al allows for (70 – 100 wt% of dimer fatty acid).
48. **Regarding claim 32:** See paragraph 23 of the instant rejection, herein incorporated by reference.

Obviousness Rejection III

49. **Claims 1, 3, 4, 9-10, 14-19, 24, 26, and 33-34** are rejected under 35 U.S.C. 103(a) as unpatentable over Santaniello (U.S. Patent 3,264,236).
50. **Regarding claim 1:** Santaniello teaches an isocyanate-terminate prepolymer that is the reaction product of hydroxyl-functional polyester with "a molar excess" of polyisocyanate (Col 1 lines 10-15, 47-49, 60-65). Although Santaniello fails to explicitly teach the claimed NCO:OH ratio, it would have been obvious to arrive this limitation since the prepolymer must be isocyanate-terminated, and using at least a 2:1 molar ratio for NCO:OH groups ensures all of the isocyanate-reactive groups are consumed and the prepolymer has isocyanate-termination. This is supported by Santaniello teaching to use "a molar excess" of polyisocyanate with respect to isocyanate-reactive groups of the polyester.
51. Regarding the claimed "moisture curable adhesive" limitation of claim 1, Santaniello teach the prepolymer is useful as a *binding* for solid fuel propellant - this is taken to satisfy "adhesive". Furthermore unblocked isocyanate groups, such as those present in the prepolymer of Santaniello, can readily react with water thereby forming urea groups. Because Santaniello fails to cure the prepolymer with moisture does not over come the fact that said prepolymer would exhibit the same moisture cure behavior as claimed - unblocked, free isocyanate groups react with water.
52. **Regarding claim 3:** The fatty acid is based on C18 acids (Col 2 lines 1-3).
53. **Regarding claim 4:** Example 1 shows the polyester is the reaction product of diol and fatty acid, wherein said fatty acid comprises 75 wt% of dimer and 25 wt% of trimer, wherein the OH:COOH ratio is 1.5:1.
54. **Regarding claim 9:** The polyester has a molecular weight of 2,000 (Col 2 line 66).

55. **Regarding claims 10, 14-19, 24, and 26:** Santaniello is silent with respect to the claimed properties. Still, one of ordinary skill would reasonably expect the relied upon prepolymer to exhibit the same characteristics because they share the same composition and the prima facie case of obviousness for compositions based on close similarity in chemical structure arises from the expectation compounds similar in structure will have similar prosperities. *In re Gyurik*, 596 F.2d 1012, 201 USPQ 552 (CCPA 1979).

56. **Regarding claims 33 and 34:** The diol used to make the polyester is diethylene glycol (Example 1).

Obviousness Rejection III

57. **Claims 21 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Westfechtel et al ('811) in view of Krebs (U.S. Patent 5,994,493).

58. **Regarding claims 21 and 22:** As previously discussed in paragraph 4, Westfechtel et al teach moisture-curable adhesive comprising isocyanate-terminate prepolymer that is the reaction product of polyisocyanate and hydroxyl-functional polyester wherein said polyester comprises dimers of fatty acid. However Westfechtel et al fail to teach wood substrates as a suitable bonding material.

59. Krebs also teaches moisture curable adhesives comprising isocyanate-terminate prepolymer that is the reaction product of polyisocyanate and hydroxyl-functional polyester wherein said polyester comprises dimers of fatty acid (Abstract; col 4 lines 23-39; col 5 lines 41-46). Moreover, Krebs teach that the adhesive is useful in bonding to wood, specifically wood fiber molds - which is taken to satisfy the "cladding" material of claim 22.

60. Therefore it would have been obvious to arrive at the limitations of claims 21 and 22 since Krebs teach wood as a suitable bonding material for adhesives comprising analogous moisture curable isocyanate-terminated prepolymers.

Obviousness Rejection IV

61. **Claims 21 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Tetsuo et al (JP 2003-013032) in view of Krebs ('493).

62. **Regarding claims 21 and 22:** As previously discussed in paragraph 25, Tetsuo et al teach moisture-curable adhesive comprising isocyanate-terminate prepolymer that is the reaction product of polyisocyanate and hydroxyl-functional polyester wherein said polyester comprises dimers of fatty acid. However, Tetsuo et al fail to teach wood as a suitable bonding material.

63. As discussed in paragraph 65 Krebs also teaches moisture curable adhesives comprising fatty acid dimer polyester, wherein said adhesive is useful in bonding to wood, specifically wood fiber molds - which is taken to satisfy the "cladding" material of claim 22.

64. Therefore it would have been obvious to arrive at the limitations of claims 21 and 22 since Krebs teach wood as a suitable bonding material for adhesives comprising analogous moisture curable isocyanate-terminated prepolymers.

Obviousness Rejection V

65. **Claims 21 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Westfechtel et al ('811) in view of Tetsuo et al (JP 2003-013032) and Krebs ('493).

66. **Regarding claims 21 and 22:** As previously discussed in paragraphs 36-37, Westfechtel et al in view of Tetsuo et al render obvious moisture-curable adhesive comprising isocyanate-terminate prepolymer that is the reaction product of polyisocyanate and hydroxyl-functional

polyester wherein said polyester comprises dimers of fatty acid. However, the prior art fail to teach wood as a suitable bonding material.

67. As discussed in paragraph 65 Krebs also teaches moisture curable adhesives comprising fatty acid dimer polyester, wherein said adhesive is useful in bonding to wood, specifically wood fiber molds - which is taken to satisfy the "cladding" material of claim 22.

68. Therefore it would have been obvious to arrive at the limitations of claims 21 and 22 since Krebs teach wood as a suitable bonding material for adhesives comprising analogous moisture curable isocyanate-terminated prepolymers.

Response to Arguments

69. Applicant's arguments filed 9/9/2009 with respect to the rejection of claims 1-4, 7, 9-26, and 29-34 under 35 U.S.C. 112 2nd paragraph have been considered and are persuasive – the rejection has been withdrawn.

70. Applicant's arguments filed 9/9/2009 with respect to the rejection of claims 1-4, 7, 9-26, and 29-34 over the applied prior art have been considered but are not persuasive.

71. Applicants first argue the claimed invention is not anticipated or rendered obvious because the amended claims now require an NCO:OH ratio between 2:1 and 16:1, and Westfechtel et al only teaches an NCO:OH ratio of 1.2:1 to 0.8:1.

72. In response, it should be noted that independent claim 29 fails to set forth an NCO:OH ratio, and therefore applicants' remarks are not persuasive with respect to claim 29 since they are not commensurate in scope with its limitations. Regarding claims 1 and 24, applicants' attention is redirected to paragraph 4 of the instant rejection. Component B) of Westfechtel et al, which uses an NCO:OH ratio between 2:1 to 6:1, satisfies the claimed equivalent ratio.

73. Applicants argue the teachings of Tetsuo et al since the claims now require the non-dimer fatty acids present in the polyester to be "linear dicarboxylic acids", and Tetsuo et al requires the non-dimer fatty acids to be aromatic – applicants assert the presence of the aromatic groups prevent said non-dimer dicarboxylic acid from being linear.

74. Applicants argue the teachings of Tetsuo et al since the claims now require non-dimer fatty acids present in the polyester to be "linear dicarboxylic acids", and Tetsuo et al requires aromatic non-dimer fatty acids – the presence of these aromatic groups prevents said dicarboxylic acid from being linear.

75. In response, the examiner would like to first point out claim 29 contains no limitations regarding "linear" "non-dimer fatty acids" and therefore applicants' remarks are not commensurate in scope with claim 29. Moreover, whether a compound is aliphatic vs. aromatic does not control whether that compound is linear. Instead, linear compounds are required to be *non-branched and have two functional groups*, which are satisfied by the non-dimer compounds of Tetsuo et al. Applicants' position that Tetsuo et al fail to teach or suggest the claimed invention is unfounded since the relied upon non-dimer dicarboxylic acids are in fact linear.

76. Applicants argue that Santaniello fails to anticipate or render obvious the claimed invention because the relied upon prepolymer is used as a fuel-binder and not a moisture-curable adhesive. While it may be true that Santaniello never refers to the prepolymer as a *moisture-curable adhesive*, the fact remain Santaniello teach it as being useful as an adhesive since it can bind together solid-fuel, and the prepolymer inherently is moisture-curable based on the presence of the unblocked free isocyanate groups.

77. Applicants also state Santaniello teaches NCO contents of only about 6 wt%, but the claimed invention requires between 12-30 wt%. In response, only dependent claim 12 requires an NCO content between 12 to 30 wt% and that claim has not been rejected in view of Santaniello. Therefore, this position is not persuasive because it is not commensurate in scope with the limitations set forth in the claims rejected in view of Santaniello.

Conclusion

78. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

79. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

80. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BENJAMIN J. GILLESPIE whose telephone number is (571)272-2472. The examiner can normally be reached on 8am-5:30pm.

81. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

82. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Benjamin J Gillespie/
Examiner, Art Unit 1796

/Vasu Jagannathan/
Supervisory Patent Examiner, Art Unit 1796